**Practice 4. Building queries in SQL mode using SQl-instructions and creating forms in MS Access**

**Queries in SQL mode**

To select data from the database, the SQL (Structured Query Language) language is used. SQL is a programming language that closely resembles English, but is designed for database management programs. Every executed query is actually SQL based.

**Task 1) Simple query to select**

**Task:** select all Projects numbers from the “Projects” table, except for one (make sure that such a number is present in the table, if not, select the one that is available).

1. Create a query on selection based on the " Projects " table (the " Projects number" field).

2. Open the query.

3. Switch to SQL mode ("View" - SQL). Change your code like this:

**SELECT Projects. [Projects number] FROM Projects WHERE (Projects. [Projects number]) <> 8;**

* Replace the number 8 with the one that exists in your table (field "Task number")

4. Run the query, make sure it is correct.

5. Add tables Tasks and Employees to the query.

6. Return to SQL mode.

**7. С**hange the query (write strings in SQL) so that it displays the Project Number, Project, Surname for the project by number> 2, for example.

8. Run your query.

9. Save the query as "SQL\_Selection".

2. Make a sort of the selected records in SQL mode:

"Project number" - descending ORDER BY Project. [Project number] DESC;

Surname (ascending): ORDER BY Employee. [Surname];

3. Run your query. Save your changes.

**Task 2. Create your own query on selection by using SQL language**

**Create form.**

Introduction:

Form is a database object that can be used to enter, modify, or display data from a table or query. Forms are used to control access to data, such as determining which fields or rows of data should be displayed.

An efficient form makes working with the database faster because users do not need to search for the information they need. The attractive form makes working with the database not only efficient, but also more enjoyable.

In addition, forms can prevent invalid data from being entered.

**Types of forms:**

1. Form for entering and modifying data:

* Form with one element;
* Divided form;
* Form for multiple elements (strip form);
* Composite form (main and subordinate, with a one-to-many relation).

2. Summary table ( chart).

3. Navigation form.

4. Dialog box.

A form can be created using a variety of tools found on the **Create tab** in the **Forms group** (depending on the type and complexity of the form you are creating).

**Task 3: on the basis of the table "Employees" create a form "Employees" containing the relevant information.**

1. In the Navigation window, select the Employees table.

2. On the Create tab, in the Forms group, select Form.

3. Switch to Form View and check the correctness of the displayed information. Note that the form also displays information about the project number and task associated with the "People" table.

4. Save the form as "Employee\_Information".

5. Set the properties of the form:

5.1. In Design mode, open the Property Sheet on the Design tab. The Property Sheet will open.

5.2. In the Property Sheet for the Label fields, click on the Format tab, find and set the values (as you like) to the following properties: Font (Font Name); Font Size; Saturation (Font Weight);

Explore other available properties.

5.3. Correct the Caption field for the items placed on the form (set captions to the items).

5.4. Click anywhere in the Details area of form and set: background color (Back Color); design (Special Effect);

Explore other available properties.

5.5. To align form elements in design mode, go to the Arrange tab in the Size and Order group, use the Align button.

5.6. Select the field names on the form and align to the grid.

3. Save your changes.

**Task 4.**

**Task: on the basis of the table "Projects" create a form "Information\_Projects" using a blank form (Blank Form).**

1. On the Create tab, in the Forms group, select Blank Form.

2. The Field List window will open on the right, in which you need to select and transfer to the form all fields from the "Projects" table (by double clicking on the field name or dragging the field with the mouse). If the Field List is not open, open it by clicking the Add Existing Fields button in the Tools group. As a result, the simplest form will be automatically generated.

3. Save the form under the name "Information\_Projects".

4. In Design mode, work with the style of the form (on the form, right-click, Form Properties).

5. Save the form.